

Global knowledge, local implementation and the role of Cochrane Centres and Branches

Gerd Antes

German Cochrane Centre
University Medical Center Freiburg

Opening of the Hungarian Branch of the German Cochrane Centre
Pecs, 16 October 2014

Potential conflicts of interest

- The German Cochrane Centre is a central unit of the University Medical Centre Freiburg
- G. Antes is 100% employed by the University Hospital

Contents

- Global knowledge – local implementation:
The division of the world
- The systematic distortion of the knowledge base
- Activities and role of Centres and Branches
- Hungary as contributor to and user of global knowledge



trials - trials - trials - trials

System

Information from similar persons with same treatment

Neumann

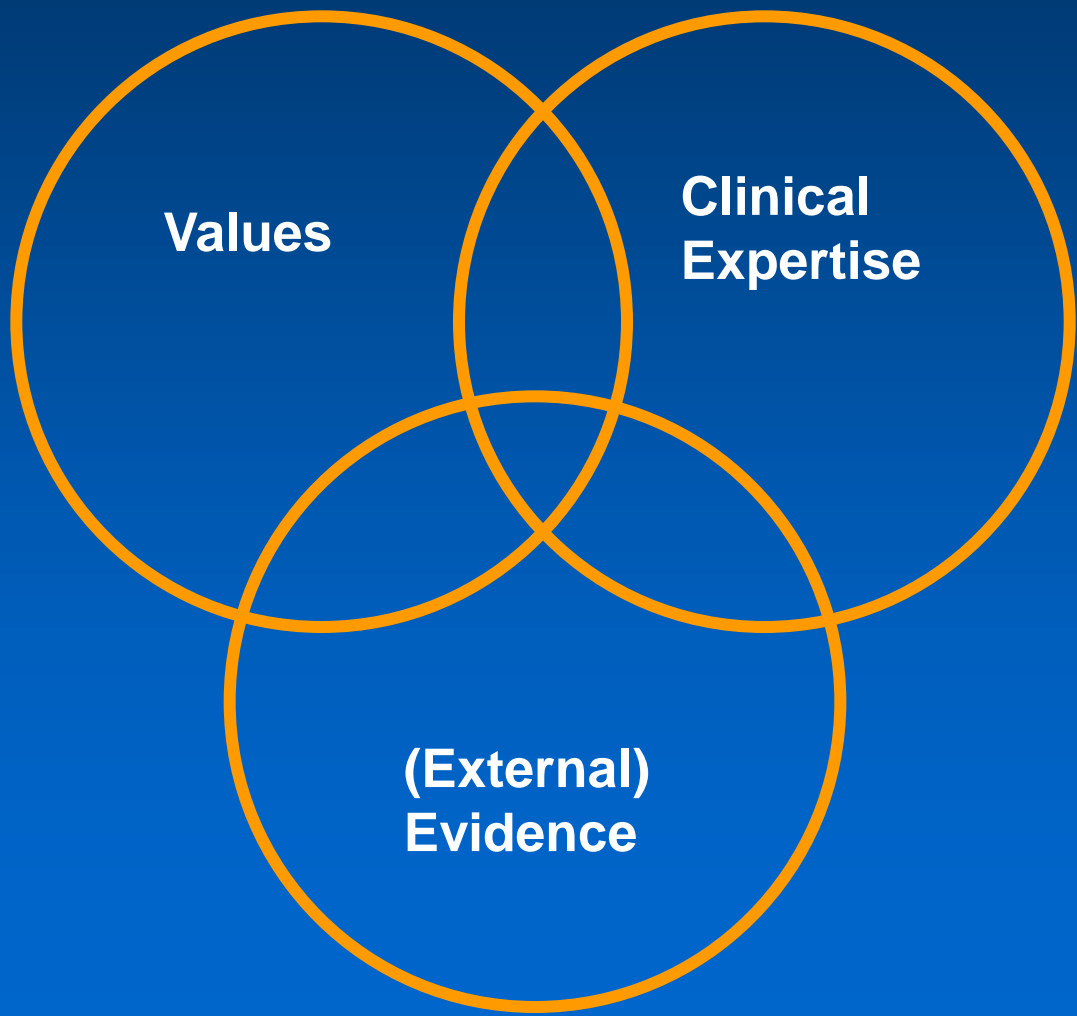
Evidence-Based Medicine

Evidence-based medicine is the **conscientious, explicit** and **judicious** use of **current best evidence** in making decisions about the care of **individual** patients.

Sackett et al., BMJ 1996

Origin of concepts of EBM: McMaster University, Hamilton, Canada
Linked to problem-based learning; 1968; 1991 under name of EBM

EBM = cookbook medicine ?



Transfer of Research into Practice

Answers to medical questions

- Clinical (randomised / controlled) studies
- Epidemiological (observational -) studies

....

Evidence
production

50 %

Evidence
application

- Practicing physicians
- Health authorities, sickness funds, insurances, institutions
- Clinical research
- Patients

Knowledge Translation



Knowledge transfer and information flood

Between 600.000 and 1.000.000 completed controlled trials

20.000+ randomised trials / year **published**

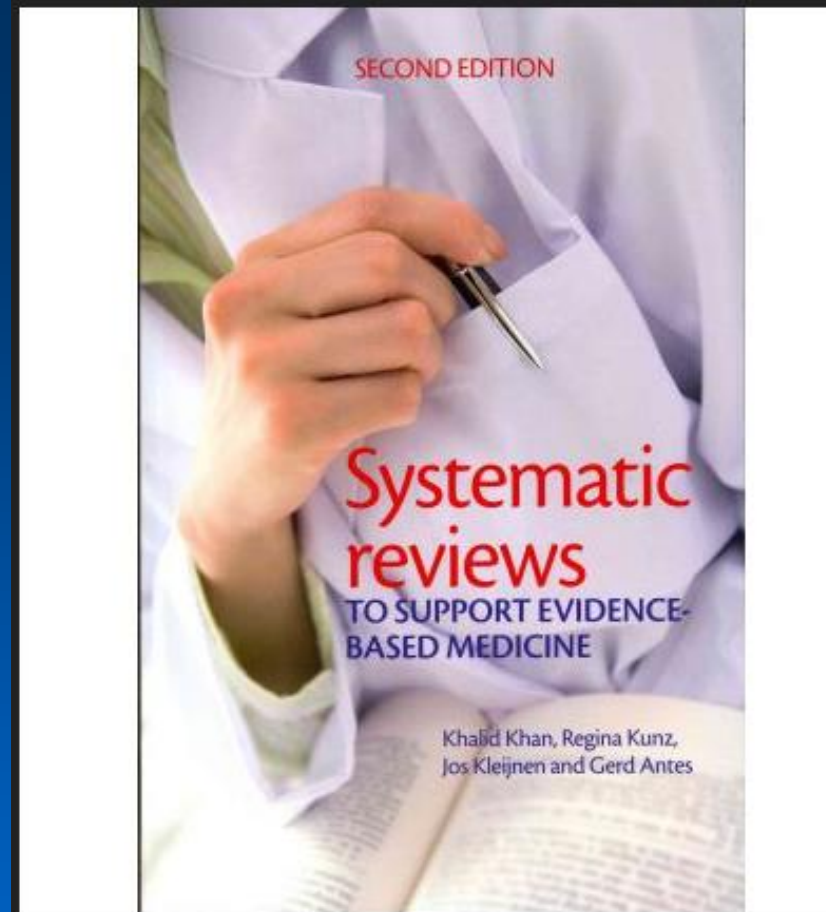
45.000+ recruiting trials currently?

No structure; no time; no resources

1. Framing the question
2. Systematic search for evidence
3. Assessing the quality
4. Synthesis
5. Interpreting and putting in context

Updating!!

Produce unbiased view of “all” evidence

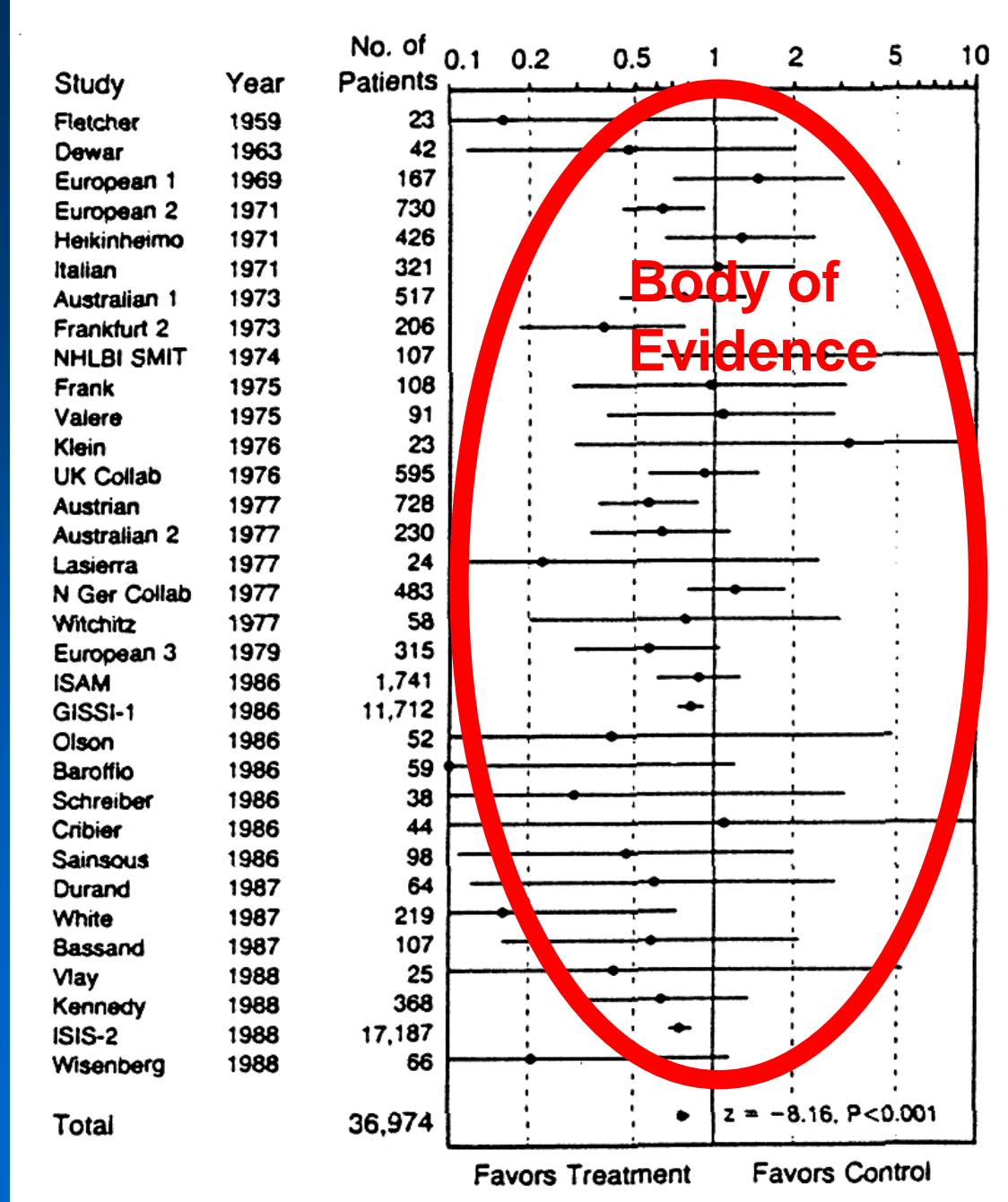


July 2011

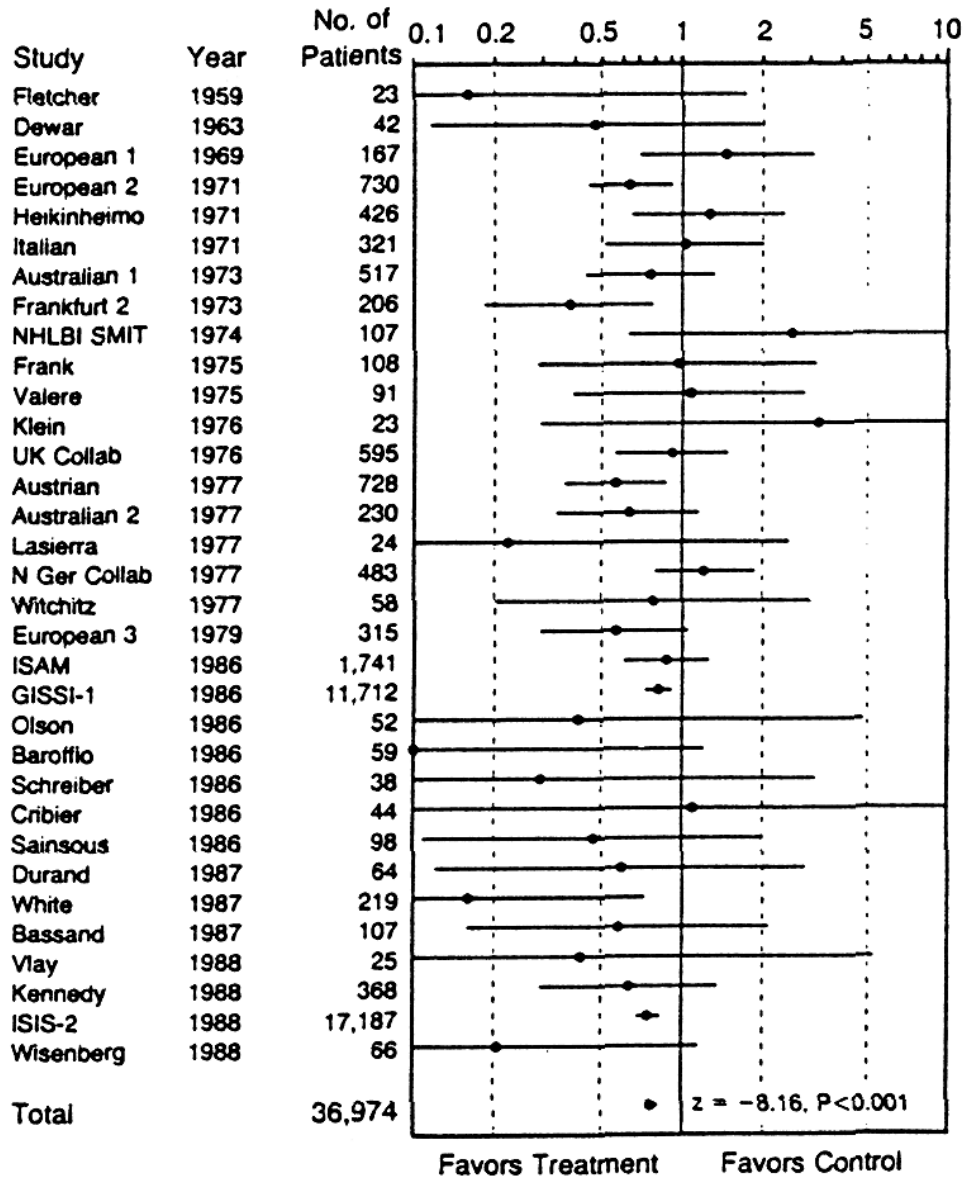
Example Thrombolysis after acute myocardial infarction

NEJM 1992

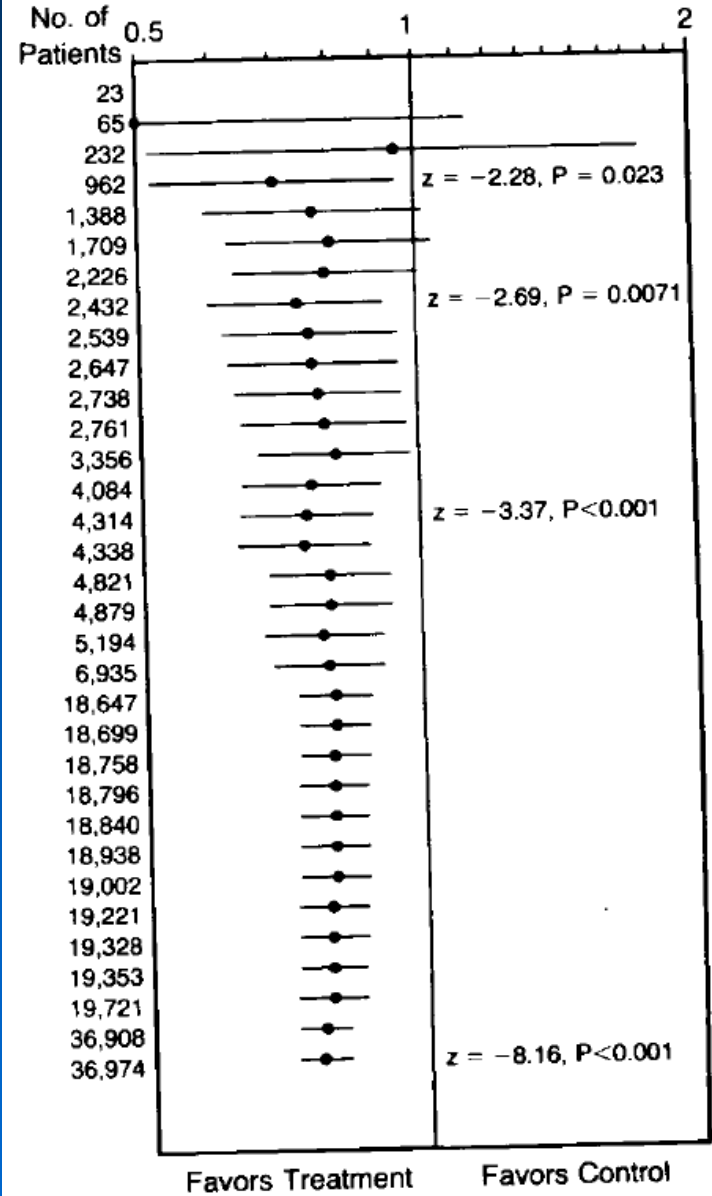
Forest Plot



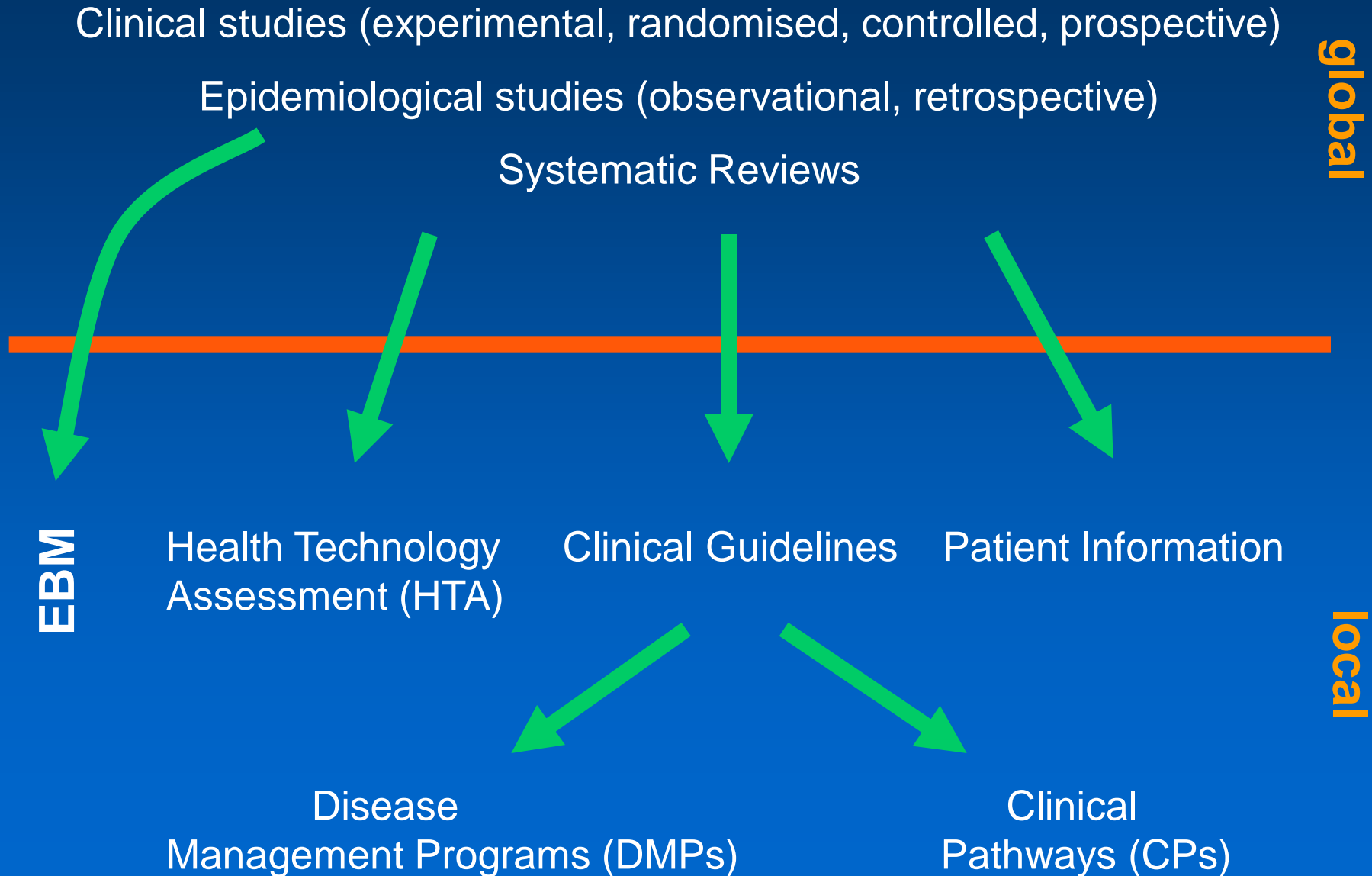
Forest Plot:



Cumulative Forest Plot:

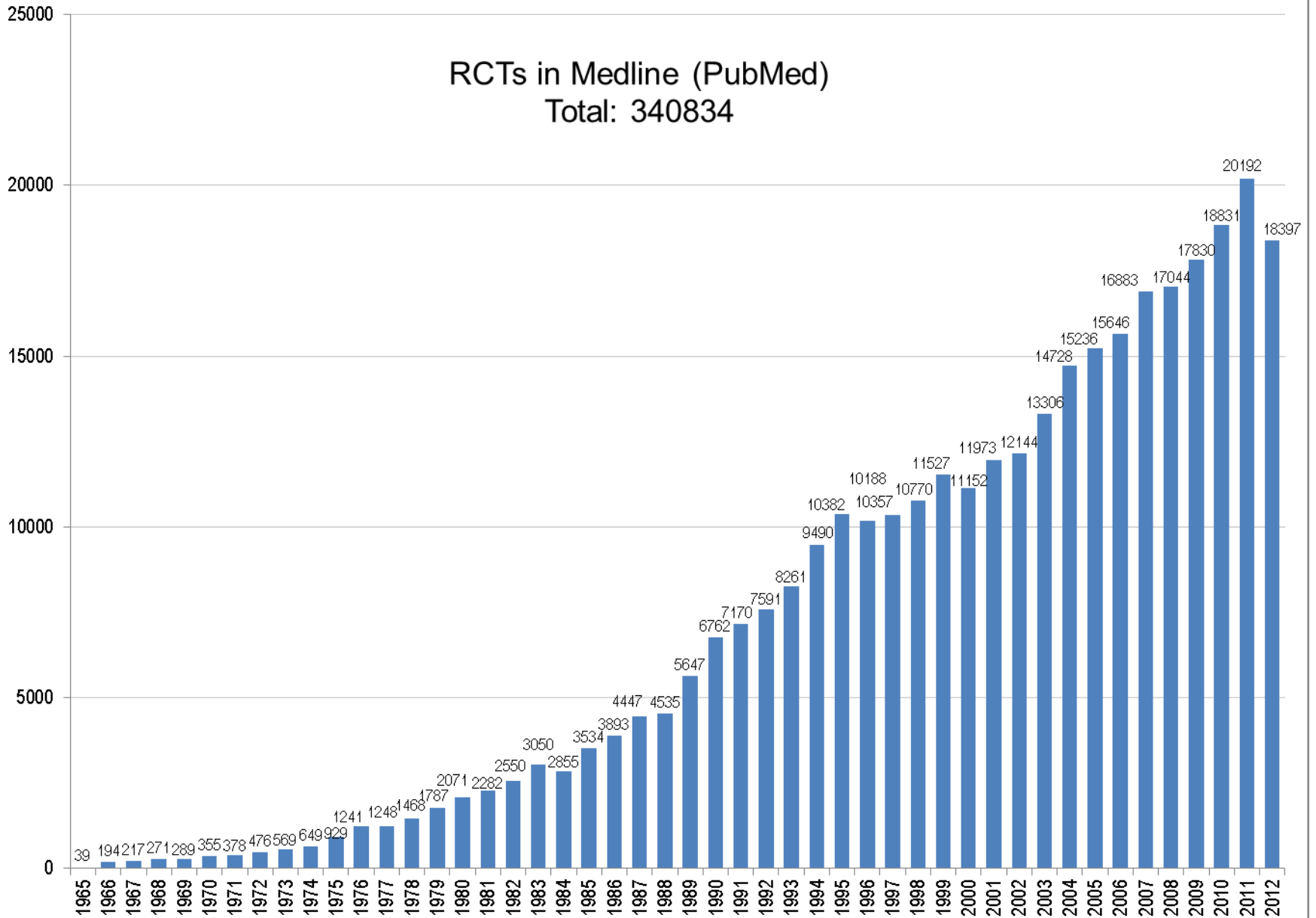


Transfer of Research into Practice



RCTs in Medline (PubMed)

Total: 340834



The truth

RCTs in Medline (PubMed)
Total: 340834

Freiburger Ethics Board
2000-2002:
48% published
until 2010

Don't like

Only on paper



Clinical research projects at a German medical faculty: follow-up from ethical approval to publication and citation by others

A Blümle,¹ G Antes,¹ M Schumacher,¹ H Just,² E von Elm^{1,3}

ABSTRACT

Background: Only data of published study results are available to the scientific community for further use such as informing future research and synthesis of available evidence. If study results are reported selectively, reporting bias and distortion of summarised estimates of effect or harm of treatments can occur. The publication and citation of results of clinical research conducted in Germany was studied.

Methods: The protocols of clinical research projects submitted to the research ethics committee of the University of Freiburg (Germany) in 2000 were analysed.

likely to give an over-optimistic effect of treatment.⁴ This can lead to inappropriate or even detrimental treatment recommendations.⁵

The magnitude of the “file drawer problem” can only be investigated if retained study results are made available. The earliest stage at which a planned study is documented in detail is the study protocol submitted to a research ethics committee (REC) or a funding agency. Study protocols are increasingly recognised as a valuable source of information for methodological research into the dissemination of scientific evidence.⁶ Several inves-

J Med Ethics 2008

Publication rate 48%

Selective reporting =

1. Hiding whole trials (classical publication bias)
2. Hiding information from trials which are published
3. Systematically misinterpreting trial results (spin)

Selective reporting ist harmful!

Current activities on three levels

I Trial registration

II Publication

III Full access to trial reports and trial data

General experience: Only limited impact

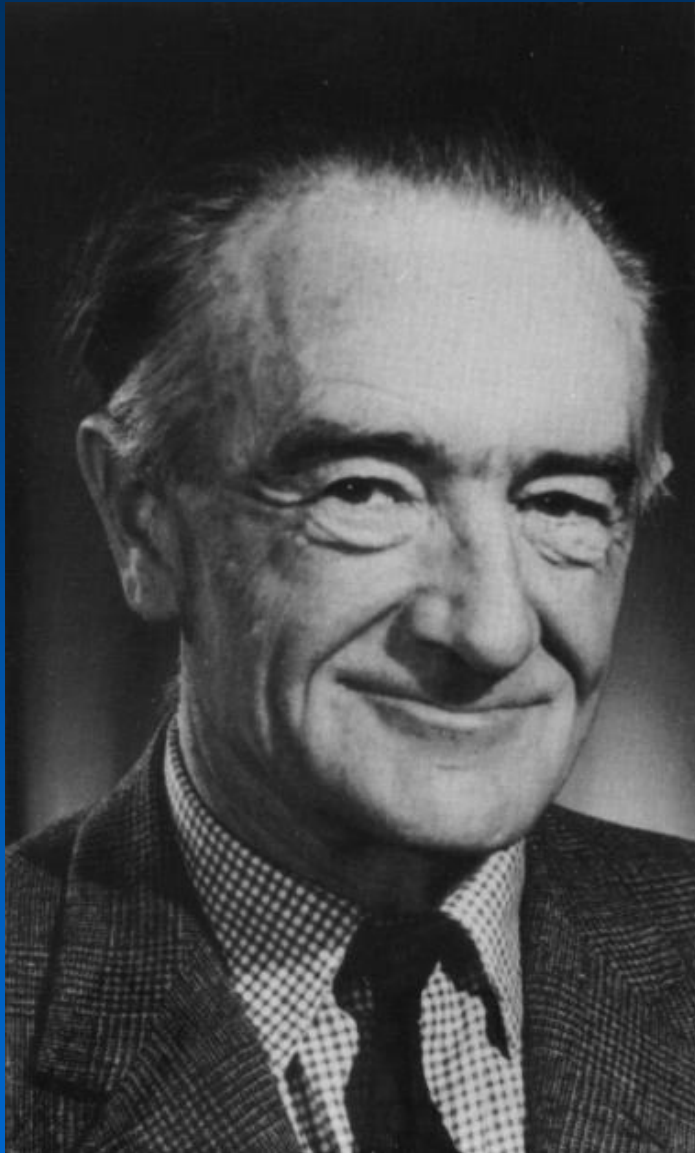
Inconsistent conditions around the world

Country	Registration	Publication
USA (2007)	law	law
Germany (2011)	-	law (drugs)
Switzerland (2013) (Law for research in humans)	law	-

The Cochrane Collaboration



Preparing, maintaining and promoting the accessibility of systematic reviews of the effects of health care interventions

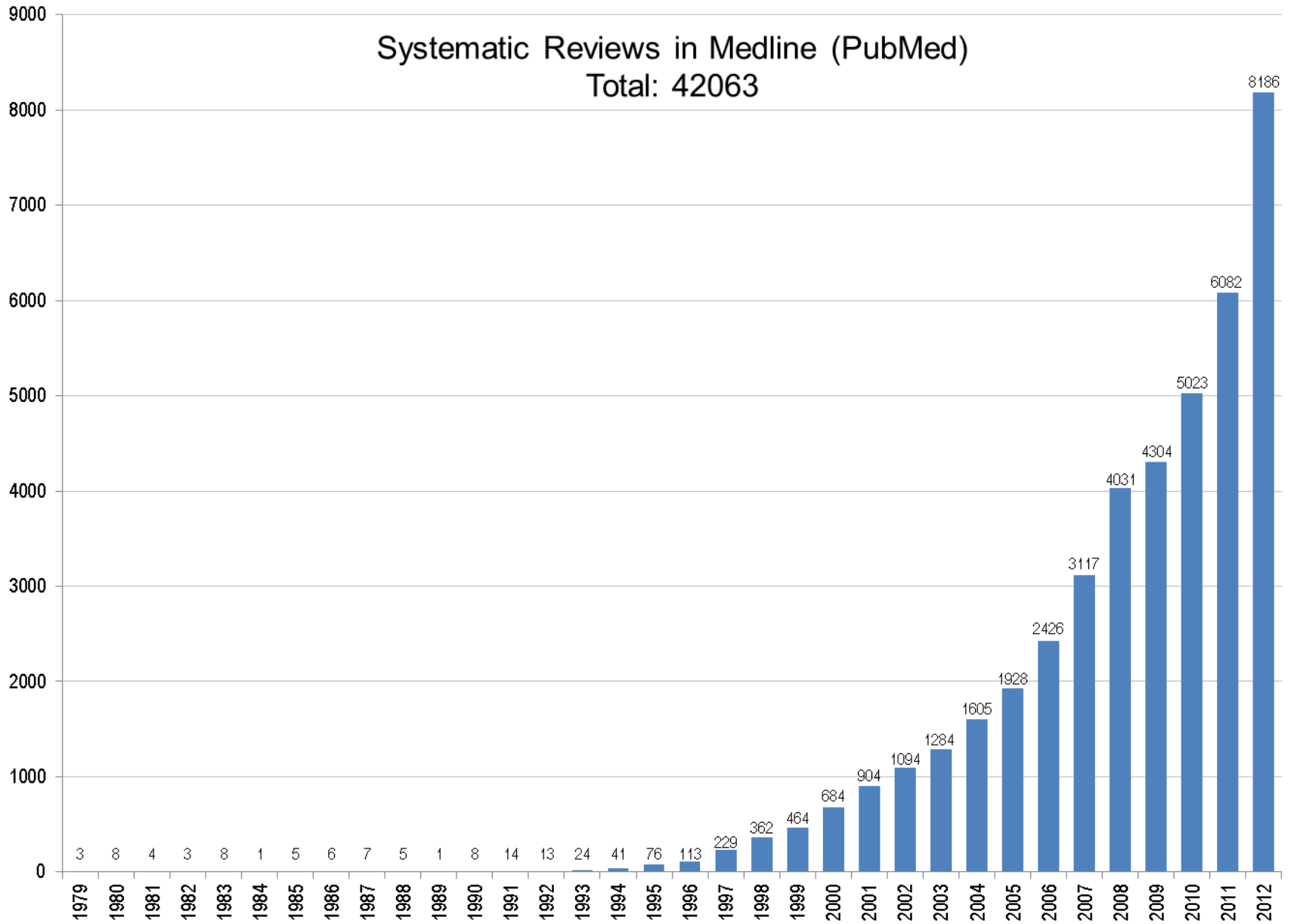


Archie Cochrane

In the 1970s, Archie Cochrane, a British epidemiologist, criticised the medical profession for not having a system to bring together the results of relevant randomised trials.

Systematic Reviews in Medline (PubMed)

Total: 42063



Transfer of Research into Practice

Clinical studies (experimental, randomised, controlled, prospective)

Epidemiological studies (observational, retrospective)

Systematic Reviews

global



EBM

Health Technology Assessment (HTA)

Clinical Guidelines

Patient Information

local

Disease Management Programs (DMPs)

Clinical Pathways (CPs)



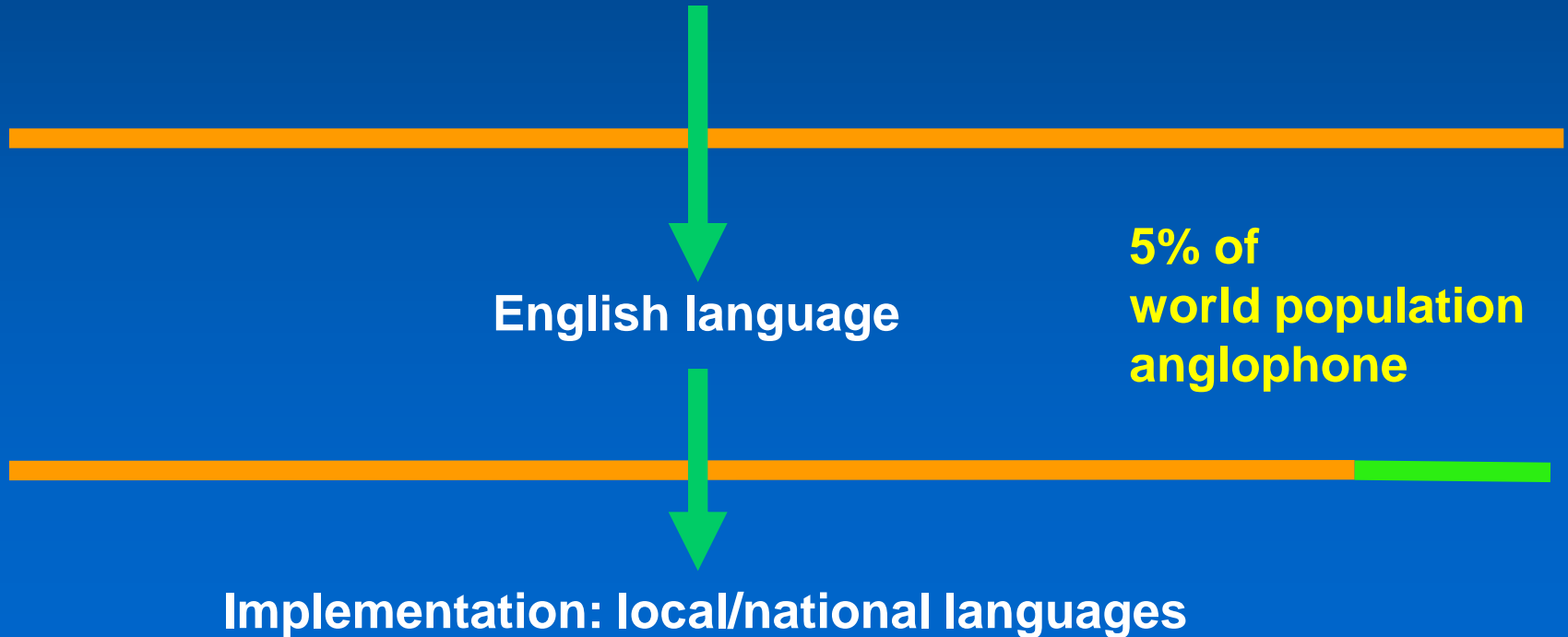
Transfer of Research into Practice

Answers to medical questions

- Clinical (randomised / controlled) studies
- Epidemiological (observational -) studies

.....

Knowledge Translation



Handsuche nach randomisierten kontrollierten Studien in deutschen medizinischen Zeitschriften

Handsearching for controlled clinical trials in health care journals published in Germany

Autoren

A. Blümle¹ G. Antes¹

Institut

¹ Deutsches Cochrane Zentrum, Institut für Medizinische Biometrie und Medizinische Informatik, Universitätsklinikum Freiburg

DMW
2007

Identified studies	22009 (12524 RCTs, 9485 CCTs)	July 2012
In Medline	9060 (5384 3676)	89 journals

59% of study reports not in Medline

included in the Cochrane Library

Contribution to Body of Evidence?

Cochrane Library: Countries of origin of trials

1. USA	32,8 %	11. Japan	2,0 %
2. Großbritannien	12,2 %	12. Finnland	1,8 %
3. Kanada	4,8 %	13. China	1,8 %
4. Schweden	3,3 %	14. Indien	1,5 %
5. Australien	3,3 %	15. Spanien	1,3 %
6. Deutschland	3,2 %	16. Israel	1,0 %
7. Italien	3,1 %	17. Schweiz	0,8 %
8. Niederlande	2,6 %	18. Irland	0,7 %
9. Frankreich	2,5 %	19. Belgien	0,7 %
10. Dänemark	2,2 %	20. Norwegen	0,6 %

Cochrane Library:

Countries of origin – adjusted for size

Studies per million inhabitants

1. Dänemark	3,867	12. USA	1,040
2. Schweden	3,525	13. Neuseeland	0,725
3. Finnland	3,231	14. Österreich	0,721
4. Großbritannien	1,934	15. Belgien	0,671
5. Irland	1,658	16. Gambia	0,601
6. Australien	1,559	17. Italien	0,510
7. Niederlande	1,526	18. Slowenien	0,500
8. Israel	1,468	19. Singapur	0,456
9. Kanada	1,412	20. Griechenland	0,450
10. Norwegen	1,285	21. Frankreich	0,391
11. Schweiz	1,073	22. Deutschland	0,375



WO IST DER BEWEIS?

Plädoyer für eine
evidenzbasierte Medizin



IMOGEN EVANS, HAZEL THORNTON
IAIN CHALMERS, PAUL GLASZIOU

Deutsche Ausgabe
herausgegeben von
Gerd Antes

HUBER 

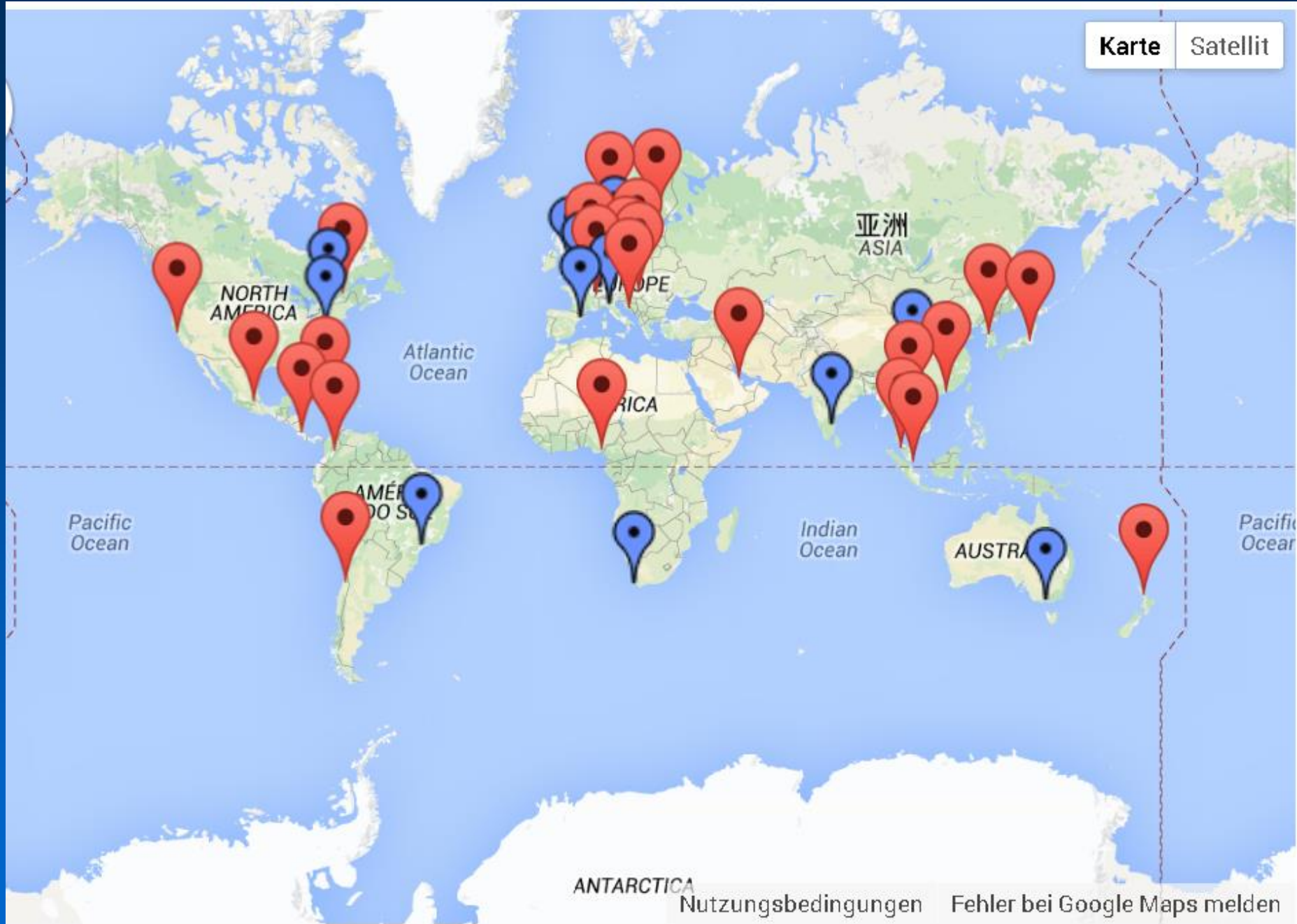
May 2013
Englisch: Testing Treatments

As pdf and as html on
de.testingtreatments.org

- www.cochrane.de
- www.cochrane.org
- www.thecochranelibrary.com

Profiles of Cochrane Centres and Branches

- Core functions to support and develop the production and use of Systematic Reviews (duties from Cochrane Manual)
- Cooperative projects with clinical guidelines groups and patient groups; producing HTA reports; producing SRs
- Empirical research into the process of „evidence into practice“
- Support transparency: Trial registration; GRADEing the evidence; Access to trials and literature
- Role as „embassy“ of the CC in hosting country



ANTARCTICA

Conclusion

- Evidence – based decision making requires an unbiased, complete knowledge base
- Acting as individual country impossible – not participating huge waste
- Cochrane Centres and Branches play a crucial role in the development of the global knowledge process
- The world needs Hungary, and Hungary needs the world

**Congratulations to the launch of the
Hungarian Cochrane Branch !!**